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In re Application of	:
Piet Herdewijn et al	:
Serial No.: 10/070,791	: PETITION DECISION
Filed: August 5, 2002	:
Attorney Docket No.: 702-020249	:

This is in response to the petition under 37 CFR 1.144, filed April 18, 2005, requesting withdrawal of an improper Lack of Unity requirement.

## BACKGROUND

A review of the file history shows that this application was filed under 35 U.S.C. 371 and accepted on August 5, 2002, and contained claims 1-39, 41 and 43-45, as amended by Preliminary amendment. In a first Office action, mailed May 18, 2004, the examiner set forth a Lack of Unity requirement in accordance with PCT Rule 13.1 and 13.2 and 37 CFR 1.499, as follows:

Group I – Claims 1-10, 12, 14-23, 37-45 (all in part) and 13 drawn to adenines;  
 Group II – Claims 1-10, 12, 14-23, 37-45 (all in part) and 13 drawn to guanines;  
 Group III – Claims 1-10, 12, 15-23 and 37-45 (all in part) drawn to diaminopurines;  
 Group IV - Claims 1-10, 12, 15-23 and 37-45 (all in part) drawn to hypoxanthines;  
 Group V - Claims 1-10, 12, 15-23 and 37-45 (all in part) drawn to xanthines;  
 Group VI - Claims 1-9, 14-23 and 37-45 (all in part) drawn to 2-amino-6-Cl-purines;  
 Group VII – Claims 1-9, 12 (all in part), and 11 drawn to other heterocycles;  
 Group VIII – Claims 24-35 drawn to nonheterocyclic cyclohexene, cyclohexadiene or benzene triols or derivatives thereof.

The examiner found that Groups I-VIII (note – the requirement as set forth lists two Groups IV and misnumbers Groups VI-VIII as V-VII) lack the same or corresponding special technical feature. The examiner found that Groups I-VII have as a special technical feature a nucleobase analogue (B in Formula 1) and that such was critical for the asserted utility and that each base constituted a distinct moiety. (Implicit in the reasoning is that the cyclic structure is attached to the nucleobase.) Group VIII is directed to the cyclic structures only. The examiner also

reasoned that the cyclic structures were well known and did not form a special technical feature alone.

Applicants replied on August 20, 2004, electing with traverse Group I, directed to adenines. Applicants argued that it was improper to raise Lack of Unity in the National phase when no Lack of Unity had been raised in the International phase. Applicants also argued that the cyclic structure was the critical element and provided the activity of the compounds.

The examiner mailed a new Office action to applicants on October 14, 2004, maintaining the Lack of Unity requirement and making it Final. The examiner stated that Unity or Lack of Unity is determined at each stage of prosecution or with each Office action. The examiner further noted that the only common structural feature was a  $-O-CH_2$  fragment which clearly did not form a base for unity of invention. For this reason the nucleobases were found to define several separate inventions. The elected claims were then further rejected under 35 U.S.C. 102(b), 35 U.S.C. 103(a) and 35 U.S.C. 112, first and second paragraphs.

Applicants replied on April 15, 2005, amending many of the claims and limiting the cyclic structure to cyclohexene triol derivatives. The Lack of Unity requirement was again traversed and each of the rejections of record addressed. Concurrently this petition was filed.

## DISCUSSION

Applicants in their petition argue that the nucleobase analogue is not essential for activity of the claimed compounds, but the now limited cyclohexene structure is. Applicants note that all claims are now limited to a cyclohexene moiety. However, there still exist claims which are directed to the cyclohexene triols alone and other claims directed to the cyclohexene triols bonded to a nucleobase analogue. As noted by the examiner the cyclohexene moiety is insufficient to define a special technical feature unifying all of the claims because the cyclohexene core is well known. It is only when other variables, such as the nucleobase analogues, are attached that structures are created which do define a special technical feature. In this instance several different compounds each having a different special technical feature are created in the bonding of the nucleobase analogue to the cyclohexene structure. Although applicants state that the nucleobase analogues do not provide the activity, but act more as a carrier, and that they are not separately patentable over each other, Lack of Unity remains between the various structures. However, in view of this admission the examiner may choose to withdraw the Lack of Unity holding in part or in full, but is not required to do so.

## DECISION

The petition is **DENIED**.

**The application will be forwarded to the examiner for further action not inconsistent with this decision.**

Should there be any questions about this decision please contact William R. Dixon, Jr., by letter addressed to Director, TC 1600, at the address listed above, or by telephone at 703-308-3824 or by facsimile sent to the general Office facsimile number, 571-273-8300

A handwritten signature in black ink, appearing to read "Bruce M. Kisliuk", with a stylized, flowing script.

Bruce M. Kisliuk  
Director, Technology Center 1600